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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,269	02/18/2004	Ronald Wevers	43225-44419AUSC	2057

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EXAMINER

PATTERSON, MARC A

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/781,269

Applicant(s)

WEVERS ET AL.

Examiner

Marc A. Patterson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/18/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 25, 30 – 33 and 39 – 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheung et al (U.S. Patent No. 5,872,201) in view of Kolthammer et al (U.S. Patent No. 5,869,575) and Prevorsek et al (U.S. Patent No. 5,677,029).

With regard to Claims 25 and 32, Cheung et al disclose a substantially random interpolymer consisting of ethylene, which is an alpha – olefin monomer, styrene, which is a vinylidene aromatic monomer and propylene which is an ethylenically unsaturated monomer; the interpolymer is used in the making of fibers, lattices, and multilayer structures (column 6, lines 32 – 34); Cheung et al therefore discloses a multilayer structure, each comprising a lattice of fibers, therefore a fabric, of the interpolymer; the multilayer structure is also a structure comprising a fabric and a polymeric layer consisting of ethylene, which is an olefin monomer, styrene, which is a vinylidene aromatic monomer and propylene monomer; the lattice of fibers is a fabric, and is therefore a woven or non – woven fabric made of man – made fibers; with regard to the claimed aspect of the interpolymer having no tackifier, no tackifier is taught by Cheung et al; Cheung et al therefore discloses an interpolymer having no tackifier; with regard to the claimed aspect of the ethylenically unsaturated monomer being optional, Cheung et al teaches the equivalence of interpolymers consisting of ethylene and styrene and interpolymers consisting

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of ethylene, styrene and propylene and therefore discloses an ethylenically unsaturated monomer that is optional. Cheung et al fails to disclose fibers which comprise cotton and a structure having a drape angle of greater than 35 degrees.

Kolthammer et al teach that a fiber comprising an ethylene interpolymer is equivalent to a polymer comprising an ethylene interpolymer and cotton (column 2, lines 35 – 44; column 17, lines 61 – 67; column 18, lines 1 – 8) for the purpose of obtaining a fiber which has high thermal stability (column 2, lines 35 – 44). One of ordinary skill in the art would therefore have recognized the advantage of providing for the cotton of Kolthammer et al in Cheung et al, which comprises an ethylene interpolymer, depending on the desired thermal stability of the end product.

Prevorsek et al teach a multilayer structure having a drape angle of greater than 35 degrees (column 24, lines 5 – 56) for the purpose of obtaining a structure which is highly flexible (column 24, lines 57 – 59). One of ordinary skill in the art would therefore have recognized the advantage of providing for the drape angle of Prevorsek et al in Cheung et al, which comprises an multilayer structure, depending on the desired flexibility of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a blend comprising ethylene interpolymer and cotton in Cheung et al, in order to obtain a fiber which has high thermal stability as taught by Kolthammer et al and to have provided for a drape angle of greater than 35 degrees in Cheung et al in order to obtain a structure which is highly flexible as taught by Prevorsek et al, therefore a polymer having a melt index of 0.1 to 10g /10 minutes.

With regard to Claim 30, Cheung et al discloses 19.5 to 98.5 mole percent ethylene, which is an olefin monomer, 1 – 50 mole percent aromatic vinylidene monomer and another ethylenically unsaturated (column 3, lines 26 – 37).

With regard to Claim 31, the interpolymer contains, interpolymerized, from 55 to 95 mole percent ethylene, which is an olefin monomer, 5 to 45 mole percent styrene, which is a vinylidene aromatic monomer and another ethylenically unsaturated monomer (column 3, lines 26 – 37).

With regard to Claim 33, as stated previously the interpolymer consists of ethylene, styrene and propylene, which is an olefin containing three carbon atoms.

With regard to Claims 39 – 40, the polymeric layer is fixed to a second layer by calendaring (column 6, lines 33 – 37).

3. Claims 26, 28 – 29, 34 – 38 and 41 – 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheung et al (U.S. Patent No. 5,872,201) in view of Kolthammer et al (U.S. Patent No. 5,869,575) and Prevorsek et al (U.S. Patent No. 5,677,029) and further in view of Turley et al (U.S. Patent No. 6,190,768).

Cheung et al, Kolthammer et al and Prevorsek et al disclose a multilayer structure comprising fabric comprising an interpolymer as discussed above. With regard to Claims 26, 28 – 29, 34 – 38 and 41 – 42, Cheung et al, Kolthammer et al and Prevorsek et al fail disclose an adhesive layer located between the fabric layers, and no adhesive layer located between the fabric layers, and up to 40 percent of a further polymeric component, where the polymeric

component is styrenic block copolymer and low density polyethylene and propylene homopolymer, and water impermeable clothes made from the fabric.

Turley et al teach, in the making of fiber or fabric from an ethylene interpolymer the use of an adhesive or the use of no adhesive between the fabric layers (column 6, lines 46 – 56), and 40 percent by weight of a further polymeric component comprising styrenic block copolymer, low density polyethylene, which is an ethylene – olefin copolymer or propylene homopolymer (column 23, lines 16 – 35) for the purpose of making diapers, which are water impermeable clothing, from the fabric (column 3, lines 7 – 12). One of ordinary skill in the art would therefore have recognized the advantage of providing for the adhesive or no adhesive of Turley et al in Cheung et al, Kolthammer et al and Prevorsek et al, which comprises an ethylene interpolymer, depending on the end product.

It therefore would have obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for the use of an adhesive or the use of no adhesive between the fabric layers, and 40 percent by weight of a further polymeric component comprising styrenic block copolymer, low density polyethylene or propylene homopolymer in Cheung et al, Kolthammer et al and Prevorsek et al in order to make water impermeable clothing from the fabric as taught by Turley et al.

4. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cheung et al (U.S. Patent No. 5,872,201) in view of Kolthammer et al (U.S. Patent No. 5,869,575) and Prevorsek et al (U.S. Patent No. 5,677,029) and Turley et al (U.S. Patent No. 6,190,768) and further in view of Adur et al (U.S. Patent No. 4,957,968).

Cheung et al, Kolthammer et al Prevorsek et al and Turley et al disclose a multilayer structure comprising fabric and adhesive layers as discussed above. Cheung et al, Kolthammer et al, Prevorsek et al and Turley et al fail to disclose adhesive layers comprising a combination of an ethylene polymer having grafted thereto an unsaturated carboxylic acid, and an isocyanate compound.

Adur et al teach the use of an adhesive elastomer comprising a polyethylene which is grafted with unsaturated carboxylic acid and isocyanate (it is therefore a combination of an ethylene polymer having grafted thereto an unsaturated carboxylic acid, and an isocyanate compound; column 17, lines 51 – 61) for the purpose of bonding polyolefin with no pretreatment (column 1, lines 6 – 10). One of ordinary skill in the art would therefore have recognized the advantage of providing for the polymer of Adur et al in Cheung et al, Kolthammer et al Prevorsek et al and Turley et al, which comprises a polyolefin, depending on the desired pretreatment of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for an adhesive layer comprising a combination of an ethylene polymer having grafted thereto an unsaturated carboxylic acid and an isocyanate compound in Cheung et al, Kolthammer et al Prevorsek et al and Turley et al in order to bond the fabric layers, which comprise polyolefin with no pretreatment as taught by Adur et al.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc A Patterson whose telephone number is 571-272-1497.

The examiner can normally be reached on Mon - Fri 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marc Patterson 10/17/05
Marc A. Patterson, PhD.
Examiner
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